

AMENDMENTS TO THE CLAIMS

1-7. (Cancelled)

8. (Currently Amended) An embedded centrifugal cooling device, comprising:

a centrifugal fan including a rotary shaft, a motor and a plurality of blades;

a heat sink, including a plurality of first cooling fins and a plurality of second cooling fins located at the same plane as the first cooling fins, wherein an annular cavity is defined between the first cooling fins and the second cooling fins, and the second cooling fins include a ~~lower portion~~ lower fin structure and a normal fin structure; and

a cover formed on the heat sink and the centrifugal fan;

wherein the motor for driving the rotary shaft is mounted below the cover and away from the heat sink, the blades are located in the cavity and extended toward a bottom of the heat sink, and there is a distance between the rotary shaft and the second cooling fins so that the entire rotary shaft is located above the ~~lower portion~~ lower fin structure of the second cooling fins, and the rotary shaft is positioned away from the ~~lower portion~~ lower fin structure of the second cooling fins.

9. (Cancelled)

10. (Previously Presented) The embedded centrifugal cooling device according to claim 8, wherein said cover serves an air seal to keep airtight.

11. (Previously Presented) The embedded centrifugal cooling device according to claim 8, wherein said annular cavity matches said centrifugal fan.

12. (Previously Presented) The embedded centrifugal cooling device according to claim 8, wherein said cooling fins are distributed under and around a region extending from a central region of said centrifugal fan to a periphery of said centrifugal fan.

13. (Original) The embedded centrifugal cooling device according to claim 8, wherein said heat sink is made of a material chosen from the group consisting of aluminum, aluminum alloy, copper, copper alloy and the combination thereof.

14. (Currently Amended) An embedded centrifugal cooling device, comprising:
a heat sink, including a plurality of first cooling fins and a plurality of second cooling fins located at the same plane as the first cooling fins, wherein a cavity is defined between the first cooling fins and the second cooling fins, and the second cooling fins include a ~~lower portion~~ lower fin structure and a normal fin structure;

a cover connected to the heat sink and having corners directly contacted to the first cooling fins; and

a centrifugal fan including a rotary shaft, a motor and a plurality of blades disposed around the hub, wherein the motor for driving the rotary shaft is mounted below the cover and away from the heat sink, the blades are located in the cavity and extended beyond a top surface of the heat sink, the entire rotary shaft is located above the ~~lower portion~~ lower fin structure of

the second cooling fins, and the rotary shaft is positioned toward the cover to be away from the ~~lower portion~~ lower fin structure of the second cooling fins.

15. (Original) The embedded centrifugal cooling device according to claim 14, wherein said cover serves as an air seal to keep airtight.

16. (Original) The embedded centrifugal cooling device according to claim 14, wherein said cavity matches said centrifugal fan.

17. (Previously Presented) The embedded centrifugal cooling device according to claim 14, wherein said cooling fins are distributed under and around a region extending from a central region of said centrifugal fan to a periphery of said centrifugal fan.

18. (Original) The embedded centrifugal cooling device according to claim 14, wherein said heat sink is made of a material chosen from the group consisting of aluminum, aluminum alloy, copper, copper alloy and the combination thereof.

19. (Currently Amended) An embedded centrifugal cooling device, comprising:
a heat sink, including a plurality of first cooling fins and a plurality of second cooling fins located at the same plane as the first cooling fins, wherein a cavity is defined between the first cooling fins and the second cooling fins, and the second cooling fins include a ~~lower portion~~ lower fin structure and a normal fin structure;

a centrifugal fan having an axial direction and a radial direction and including a rotary shaft, a motor and a plurality of blades; and

a cover, including a plurality of inlets, mounted onto said heat sink and said centrifugal fan, wherein air from ambient is flowed in the axial direction of the centrifugal fan into the heat sink from the inlets of the cover, and is flowed in the radial directions of the centrifugal fan and out of the heat sink;

wherein the motor for driving the rotary shaft is mounted below the cover and away from the heat sink, the blades are located in the cavity and extended toward a bottom of the heat sink, and there is a distance between the rotary shaft and the second cooling fins so that the entire rotary shaft is located above the ~~lower portion~~ lower fin structure of the second cooling fins, and the rotary shaft is positioned away from the ~~lower portion~~ lower fin structure of the second cooling fins.

20. (Previously Presented) The embedded centrifugal cooling device according to claim 19, wherein said cover serves as an air seal to keep airtight.

21. (Previously Presented) The embedded centrifugal cooling device according to claim 19, wherein said cavity matches said centrifugal fan.

22. (Previously Presented) The embedded centrifugal cooling device according to claim 19, wherein said cooling fins are distributed under and around a region extending from a central region of said centrifugal fan to a periphery of said centrifugal fan.

23. (Previously Presented) The embedded centrifugal cooling device according to claim 19, wherein said heat sink is made of a material chosen from the group consisting of aluminum, aluminum alloy, copper, copper alloy and the combination thereof.

24. (Cancelled)

25. (Previously Presented) The embedded centrifugal cooling device according to claim 8, wherein the motor is between the cover and the second cooling fins.

26. (Previously Presented) The embedded centrifugal cooling device according to claim 14, wherein the motor is between the cover and the second cooling fins.

27. (Previously Presented) The embedded centrifugal cooling device according to claim 19, wherein the motor is between the cover and the second cooling fins.